

DESCRIPTION OF A NEW SPECIES OF THE GENUS *COLOBICUS* LATREILLE (COLEOPTERA, ZOPHERIDAE) FROM CHINA

LIANG Ji-Bin, REN Guo-Dong*

College of Life Sciences, Hebei University, Baoding 071002, China

Abstract This paper offers a taxonomic summary of the genus *Colobicus* Latreille, 1807 from China and describes a new species, *C. changqingi* sp. nov., from Taiwan, China. A key to the known species of the genus and figures of morphological characteristics are given below. The type specimens is deposited in the Museum of Hebei University, Baoding, China (HBUM).

Key words Coleoptera, Zopheridae, Colydiinae, *Colobicus*, taxonomy, new species, China.

The genus *Colobicus* Latreille, 1807 is distributed in Europe, Asia and Africa. Until now, it has only 5 species worldwide (including the new one described hereinafter), of which 3 species are known from China (Northern Region, Hainan, Taiwan) (Fig. 1). These species were respectively proposed by Rossi (1790), Pascoe (1860), Grouvelle (1908), and Pope (1954). Among them, 1 species is distributed in Europe, 3 species in Asia, 1 species in Africa. The revision study of this genus was reported respectively by Reitter (1882), Dajoz (1980) and Pal (2009).

The species of this genus live in grain or fertile soil. Sometimes they hide under bark and fallen leaves. Most of larvae live in relatively wet soil and feed on fungoid and rottenwood.

In this paper, the author provide a key to the species of the genus and describe one new species, *Colobicus changqingi* sp. nov., from Taiwan, China. The type specimens are deposited in the Museum of Hebei University.

Colobicus Latreille, 1807

Colobicus Latreille, 1807. Parisii et Argentorati: Amand Koenig; 9.

Type species: *Colobicus marginatus* Latreille, 1807.

Diagnosis. Body distinctly flattened. Antennae with a distinct, 2-segmented club. Antennal setation sparse. Antennomere 3 distinctly elongate (at least twice as long as 4). Subantennal grooves long, reaching posterior margin of eye. Eyes round, well-developed with fine facets. Pronotum simple with flattened, short, recumbent setae. Pronotal lateral margins smooth, widest basally, distinctly explanate. Procoxal cavities narrowly open. Metacoxae narrowly separated, separation less than metacoxal length.

Elytral lateral margins weakly explanate. Elytra with distinct striae composed flattened, short, recumbent setae. Tarsal formula 4-4-4.

Key to Chinese species of the genus *Colobicus*.

1. Elytra punctures obvious, intervals without hair cluster; prosternal process narrow, with groove 2
Elytra punctures not obvious, intervals with yellow hair clusters; prosternal process wide, without groove
..... *C. changqingi* sp. nov.
2. Scutellum heart-shaped, intercoxal process acute-angled ...
..... *C. hirtus*
Scutellum round, anterior margin of intercoxal process straight *C. parilis*

1 *Colobicus hirtus* Rossi, 1790 (Figs 2–6, 17–19, 26)

Colobicus hirtus Rossi, 1790. Liburni: T. Masi & Sociorum. X xii + 272. pp. 59.

Monotoma axillaris Duftschmid, 1825. Linz: Priv. akademischen Kunat-, Musik- und Buchhandlung. 289 pp. 155.

Colobicus emarginatus Erichson, 1845. Berlin: Nicolaische Buchhandlung. 320 pp. 268. [Issued in parts, pp. 1–320 (Lieferung I, II) in 1845].

Colobicus hirtus Brullé, 1835. Histoire Naturelle des Insectes. Vol. 5; 410.

Colobicus marginatus Latreille, 1807. Parisii et Argentorati: Amand Koenig. 280 pp. 10.

1 ♂, Nankai Village, Baisha County, Hainan, 1 June 2007, BA Yi-Bin and LANG Jun-Tong leg.; 1 ♀, Nankai Village, Baisha County, Hainan, 22 May 2008, BA Yi-Bin and LANG Jun-Tong leg.

Distribution. China (Northern Region, Hainan), Japan, Russia, Turkey.

2 *Colobicus parilis* Pascoe, 1860 (Figs 7–11, 20–22, 27)

Colobicus parilis Pascoe, 1860. *Journal of Entomology*, 1: 102.

* Corresponding author, E-mail: gdren@hbu.edu.cn

This research was supported by the Ministry of Science and Technology of the People's Republic of China (2012FY111100) and the Key Laboratory of Invertebrate Systematics and Application of Hebei, China (201211).

Received 25 June 2012, accepted 5 Nov. 2012.

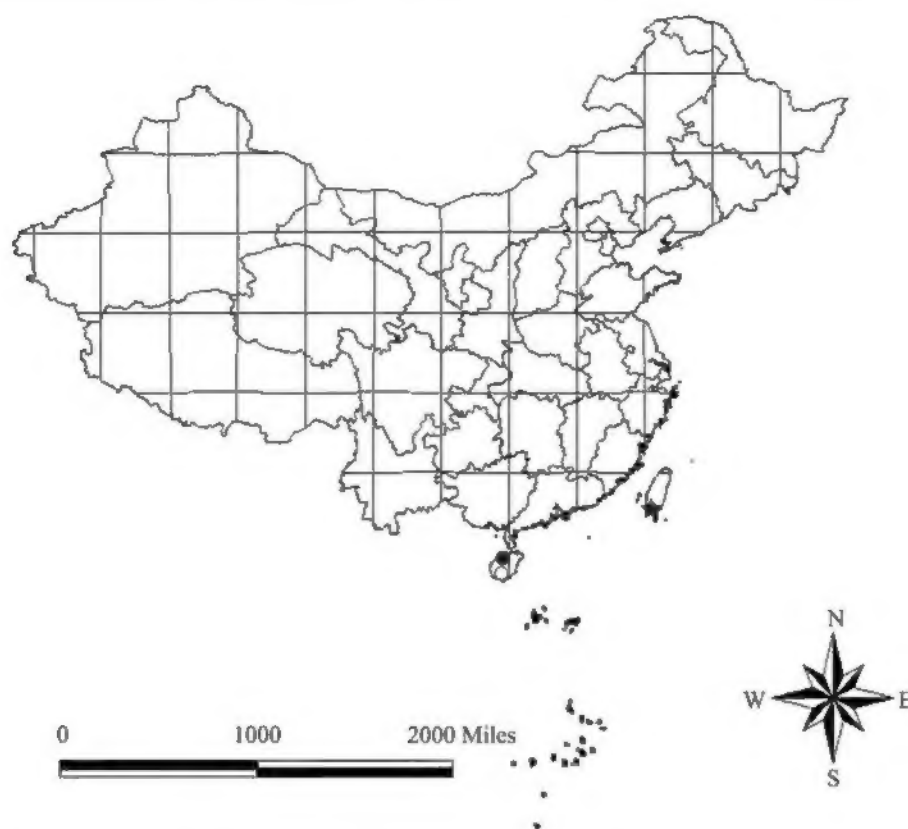
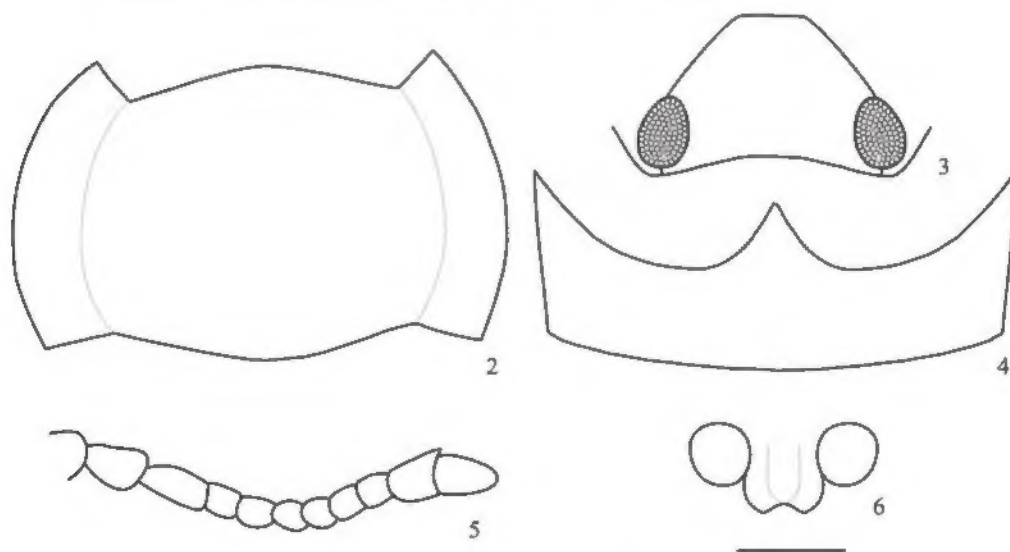


Fig. 1. Distribution of Chinese species of the genus *Colobicus*.
○ *Colobicus parilis*. ★ *Colobicus changqingi* sp. nov. ● *Colobicus hirtus*.



Figs 2 – 6. *Colobicus hirtus* Rossi, 1790. 2. Pronotum. 3. Head. 4. Intercoxal process. 5. Antenna. 6. Prosternal process. Scale bar = 1 mm.

2 ♂♂, Lianchang experimental station, Hainan, 23 Apr. 1963, ZHOU Yao leg.; 1 ♂, 1 ♀, Jianfengling, Hainan, 23 Feb. 1982, LIANG Ge-Qiu leg.; 2 ♂♂, Yuanmen Village, Baisha County, Hainan, 28 May 2007, BA Yi-Bin and LANG Jun-Tong leg.; 1 ♂, Nankai Village, Baisha County, Hainan, 22 May 2008, BA Yi-Bin and LANG Jun-Tong leg.

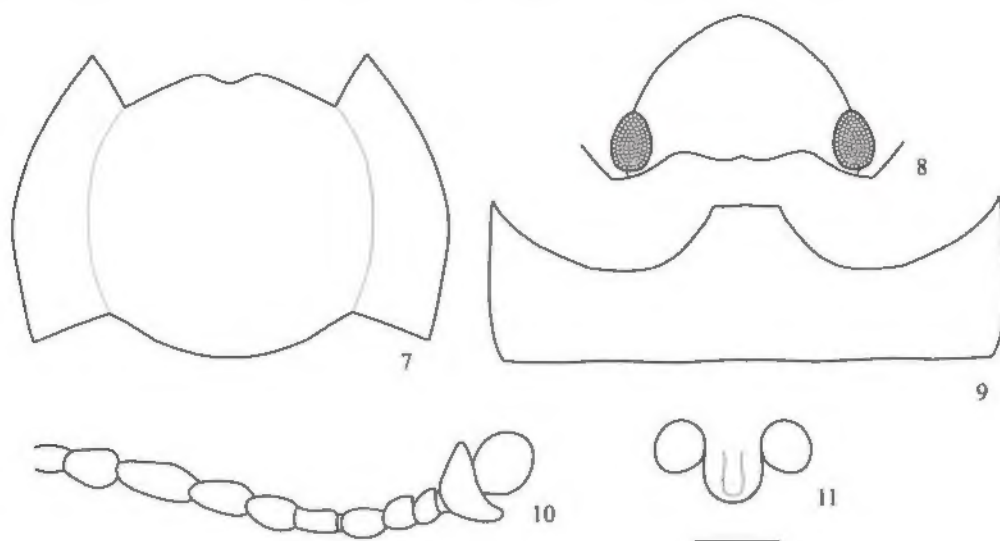
Distribution. China (Hainan, Taiwan), Japan,

Hawaii, U. S.

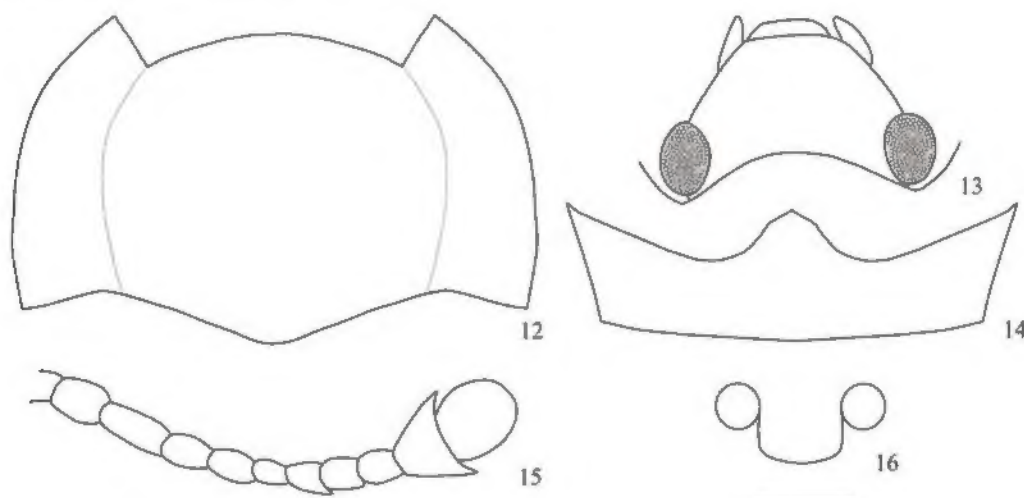
3 *Colobicus changqingi* sp. nov. (Figs 12 – 16, 23 – 25, 28)

Male. Body oblong-oval, dark black, slightly shining.

Head. Anterior margin of clypeus straight; entire dorsal covered with yellowish-white, short hairs.



Figs 7 – 11. *Colobicus parilis* Pascoe, 1860. 7. Pronotum. 8. Head. 9. Intercostal process. 10. Antenna. 11. Prosternal process. Scale bar = 1 mm.



Figs 12 – 16. *Colobicus changgingi* sp. nov. 12. Pronotum. 13. Head. 14. Intercostal process. 15. Antenna. 16. Prosternal process. Scale bar = 1 mm.

Anterior genae with small punctures; frontoclypeal suture not obvious; posterior genae with coarse punctures; eyes round, outer margins of it with black, erect hairs; frons with dense, small punctures. Antennae long, reaching to the base of pronotum, two apical segments expand, the third segment longer than the fourth (ratio 1.6); length (width) ratio of antennomeres II – XI as follows: 15.2 (12.5), 20.5 (11.0), 14.5 (9.5), 14.1 (9.7), 11.0 (7.5), 11.2 (11.2), 11.5 (11.3), 12.5 (11.5), 15.5 (26.5), 20.2 (21.5).

Pronotum wider than long (ratio 2.2), widest at basal 1/3, base obviously wider than apical; anterior margin obviously concave, with dense, yellow hairs, slightly convex in middle; lateral margin evenly sinuous, strongly contract towards apices, base of it substraight; base obviously convex in middle, with deep groove; front angles prominent, acute-angled;

posterior angles right-angled. Disc convex, surface with dense, small punctures and sparse short setae; sides slightly brown, with dense, regular hairs; propleuron with small, round punctures. Prosternum with sparse punctures; prosternal process wide, apex straight, without middle groove. Mesosternum with sparse wrinkles, metasternum smooth, without hairs, midline slender, reaching to base. Abdomen with small punctures and sparse yellow hairs, intercoxal process obtuse-angled, anal segment bottom blunt round, with sparse hairs.

Scutellum oval, smooth, without punctures. Elytra elongate, 3.7 times as long as pronotum, base obviously wider than pronotum; humerus right-angled, with dense, yellow hairs; lateral margin brown; disc with punctato-striate, punctures not obvious; intervals with regular yellow hair clusters.

Legs short, femora thickest in middle, slightly



Figs 17 – 25. Aedeagus of *Colobicus*. 17 – 19. *Colobicus hirtus* Rossi, 1790. 20 – 22. *Colobicus parilis* Pascoe, 1860. 23 – 25. *Colobicus changgingi* sp. nov. 17, 20, 23. Dorsal view. 18, 21, 24. Lateral view. 19, 22, 25. Ventral view. Scale bars = 0.2 mm.



Figs 26 – 28. Adult male of *Colobicus*. 26. *Colobicus hirtus* Rossi, 1790. 27. *Colobicus parilis* Pascoe, 1860. 28. *Colobicus changgingi* sp. nov. Scale bars = 1 mm.

surpass lateral margin of body, tibiae broaden from base to apex, apices straight; outer margin with yellow short hairs, inner margin smooth.

Aedeagus length 1.26 mm, 5.7 times as long as wide. Paramere parallel-sided, 0.66 times as long as basal plate. median lobe short, 0.29 times as long as

entire length.

Male body length 4.6 mm, width 2.3 mm.

Female. Unknown.

Holotype ♂, Shizi Village, Pingdong County, Taiwan, 30 May 2009, ZHOU Wen-Yi leg.

This new species resembles *C. parilis* Pascoe, 1860, but with the following differences: head trapeziform; pronotum broader; lateral portions widely explanate; elytra with yellow hair clusters, punctures not obvious; prosternal process wide, apex straight, without middle groove; intercoxal process obtuse-angled.

Etymology. The new species is named for its contributor, Mr. CHEN Chang-Qin.

Acknowledgements We are grateful to Mr. CHEN Chang-Qin for contributing specimens.

REFERENCES

Beutel, R. G. and Lawrence, J. F. 2010. Handbook of Zoology, Arthropoda: Insecta. Coleoptera, Beetles. Vol. 2: Morphology and Systematics (Elateroidea,

Bostrichiformia, Cucujiformia partim). Walter de Gruyter, Berlin. 548–559.

Bouchard, P. B., Davies, Y. A. E., Zarazaga, M. A. A., Lawrence, J. F., Lyal, C. H. C., Newton, A. F., Reid, C. A. M., Schmitt, M., Slipiński, S. A. and Smith, A. B. T. 2011. Family-group names in Coleoptera (Insecta). *ZooKeys*, 88: 64, 392–396.

Dajoz, R. 1980. Insectes coleopteres: Colydiidae et Cerylonidae. *Faune de Madagascar*, 54: 61.

Ford, E. J. Jr. 1968. Colydiid beetles of Hawaii, with the description of a new species. *Pacific Insects*, 10: 161–165.

Latreille, P. A. 1807. Genera crustaceorum et insectorum secundum ordinem naturalem in familias disposita, iconibus exemplisque plurimis explicata. Tomus secundus. Parisiis et Argentorati, Amand Koenig. 280 pp. 10.

Pal, T. K. 2009. Colydiidae of Andaman and Nicobar Islands, India, with three new species (Coleoptera: Heteromera). *Entomon*, 34: 157.

Slipiński, S. A. and Schuh, R. 2008. Colydiinae. In: Löbl, I. and Smetana, A. (eds.), Catalogue of Palaearctic Coleoptera (Vol. 5: Tenebrionoidea). Apollo Books. 78–87.

中国柯坚甲属分类及一新种记述 (鞘翅目, 幽甲科)

梁集彬 任国栋*

河北大学生命科学学院 保定 071002

摘要 对中国柯坚甲属 *Colobicus* 进行了分类整理, 发现1新种, 常卿柯坚甲 *C. changqingi* sp. nov.。提供了中国已知种检索表和形态特征图。模式标本保存在河北大学博物馆。

常卿柯坚甲, 新种 *Colobicus changqingi* sp. nov. (图12–28)

新种与分布于台湾的沥青柯坚甲 *Colobicus parilis* Pascoe, 1860 在外形上相似, 两者的主要区别是: 1) 前者头部近似梯形, 前胸背板宽大, 而后者头部近似三角形, 前胸背板窄小;

2) 前者鞘翅具黄色毛簇, 后者则无; 3) 前者鞘翅刻点行不明显, 后者明显9列; 4) 前者的前胸腹突宽大, 顶部直截, 无中纵沟, 而后者前胸腹突短, 顶圆, 有中纵沟和粗糙刻点; 5) 前者腹部基节中突的前缘稍尖, 钝角形, 而后者前缘直。

正模 ♂, 台湾屏东狮子乡, 2009-05-30, 周文一采。

词源: 新种种名源自标本馈赠人陈常卿先生的名字。

关键词 鞘翅目, 幽甲科, 坚甲亚科, 柯坚甲属, 分类, 新种, 中国。

中图分类号 Q969.48

* 通讯作者, E-mail: gdren@hbu.edu.cn